

Clean Generation and Innovative Customer Services

EXELON SERVICE AREA AND GENERATION ASSETS AS OF DECEMBER 31, 2017

Provide electricity and/or natural gas through ACE, BGE, ComEd, DPL, PECO, Pepco and Constellation.

Lowest owned generation fleet CO₂ emission rate out of top 20 investor-owned companies, with more than 35,000 MW of capacity.

532 MW

SOLAR GENERATION CAPACITY IN 12 STATES AND THE DISTRICT OF COLUMBIA AT 447 LOCATIONS

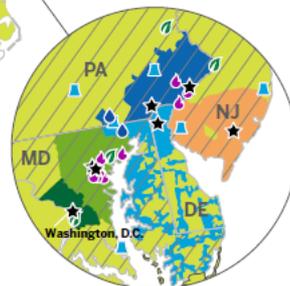
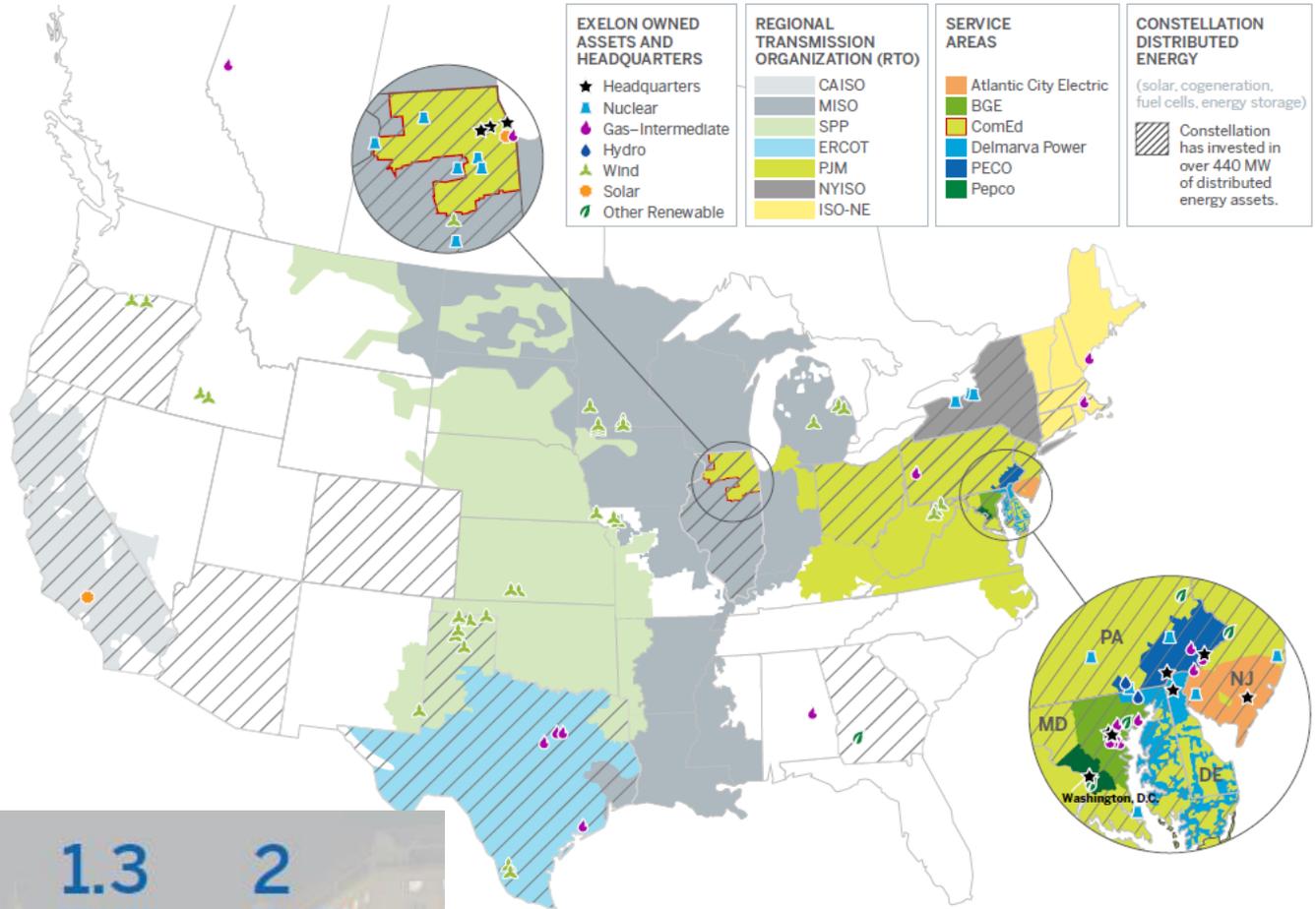
961 MW

WIND GENERATION CAPACITY IN 11 STATES. 832 WIND TURBINES. AT 42 WIND FARMS

8.9
MILLION
ELECTRIC
UTILITY
CUSTOMERS

1.3
MILLION
NATURAL GAS
UTILITY
CUSTOMERS

2
MILLION
COMPETITIVE
RETAIL
CUSTOMERS



Exelon Utilities – ACE, BGE, ComEd, DPL, PECO, Pepco



19,700
Employees

\$31.7B
2016 Rate Base

\$15.1B
In Revenue

24.9
Thousand mi²
Combined
Service Territory



10 M
Customers

8.5 M
Smart Meters
Installed



11,430
Transmission line
miles (circuit)

Note: Rate base number is Exelon and PHI combined and denotes year-end; revenue number accounts for PHI revenue as of March 24, 2016 merger date.

What's Happening on Storage in Our Jurisdictions?

DC: Grid modernization proceeding may consider storage via workstreams on NWA and Microgrids. Ambitious sustainability goals and likely high EV penetration may drive storage adoption in the future.

DE: EV proposal includes V2G school bus pilot.

IL: Microgrid demo with storage component approved; storage for back-up power purposes only in this demo.

MD: Grid modernization proceeding includes a storage working group that has coalesced around a pilot proposal to test four business/regulatory models that allow for different stakeholder roles to be explored and understood.

NJ: Ambitious new energy plan with a significant storage component. A year of study about to begin. EV proposal includes V2G school bus pilot.

PA: Considered a bill this session to authorize utility microgrid and storage demos. Likely to see favorable consideration next year.

Barriers to Utility Storage in Restructured Markets

Barrier #1 :



problems

Barrier #2 given



problems: Accessing value streams

What's needed to break down these barriers:

Regulatory flexibility re. asset categorization

Get away from rigid thinking re. ownership vs. operation

Get away from rigid thinking re. IFM vs BTM

New types of collaborations

New revenue models – Decoupling 2.0

Maryland -- Storage Business Models

Currently, making distribution system storage projects pencil out on just grid reliability is difficult. For most projects, they may make economic sense if you can tap multiple value streams. There are various business models that allow this type of value stacking. We need to learn how each would work to maximize consumer value.

Pilot Title	Storage Ownership	Storage Control for Grid Reliability	Storage Operation in Wholesale Markets	Application to Rate Base
1. Utility Centric	Utility	Utility	Utility	Storage investment less revenues from wholesale transactions
2. Multi-Use	Utility	Utility	3 rd party	Storage investment less revenues from 3 rd party lease for wholesale transactions
3. 3rd party Ownership	3 rd party	Utility	3 rd party	Utility payment to 3 rd party for priority access to storage for grid reliability
4. Virtual Powerplant	Customer, utility or 3 rd party	Utility via aggregator	3 rd party or DSO/utility (if at all)	Utility payment to aggregator for priority access to storage for grid reliability Storage investment or customer rebate if utility owns or helps finance storage units

We conducted two hours sessions held individually with Fluence, Tesla, Stem, Lockheed Martin, RES, NEC and ABB to determine both experience with and interest in executing pilots under each model.